

Helena

Asset® NH₃

PLANT NUTRITIONAL ADDITIVE

This product is not a fertilizer.

Patents Pending

CONTAINS NON-PLANT FOOD INGREDIENTS:

ACTIVE INGREDIENTS: Carboxylic and polyacrylic acid salts 37.00%

INERT INGREDIENTS: 63.00%

TOTAL: 100.00%

SN: 111398

F224

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

See Inside Booklet for Additional Precautionary Statements

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, and clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling. Do not apply this product in such a manner as to directly expose workers or other persons. In addition, follow precautionary statements on accompanying product's label(s).

WHAT TO DO IN CASE OF CONTACT:

IF IN EYES: Immediately flush eyes with clean water for at least 15 minutes. Call a physician if irritation persists.

IF ON SKIN: Remove contaminated clothing and wash skin with soap and water. Call a physician if irritation persists.

IF INHALED: Move to fresh air. See a physician if irritation persists.

IF SWALLOWED: Give a large amount of water to drink, make person vomit and immediately call a physician. Do not induce vomiting or give anything by mouth to an unconscious person.

If contact is made with a spray solution containing pesticides, follow the "Statement of Practical Treatment/First Aid" statement on the pesticide label(s).

STORAGE AND DISPOSAL

Store in original container only. Keep packages tightly closed and do not allow water to be introduced to container contents. Do not store near heat or open flame. This product may freeze at temperatures less than 10°F. Thawing occurs readily at temperatures greater than 32°F.

Container Disposal: Empty packaging should be offered for recycling or disposal in accordance with Federal, State and local authorities. If packaging is burned, stay out of smoke.

For help in chemical emergencies involving spill, leak, fire or exposure, call toll free 1-800-424-9300.

GENERAL INFORMATION

BEFORE USING THIS PRODUCT, READ ALL PRECAUTIONS, DIRECTIONS FOR USE, CONDITIONS OF SALE—LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES.

ASSET® NH₃ is a fertilizer additive designed to enhance the solubility and absorption of plant nutritional products. In addition, ASSET® NH₃ may improve the compatibility of fertilizer spray mixes and may reduce application equipment corrosion problems. ASSET® NH₃ may also be useful in lowering the freeze point of some fertilizer mixtures.

When used in conjunction with sound fertility practices, ASSET® NH₃ may improve the quality and production for a wide range of agricultural, ornamental, and turf applications.

NOTE: This product is not a fertilizer and should not be used as a substitute.

USE RECOMMENDATIONS

ASSET® NH₃ is compatible with most liquid fertilizer spray mixes at manufacturers specified label rates. However, it is recommended that a "jar test" be performed prior to the actual application. In the event of fertilizer compatibility problems, the addition of stabilizing/compatibility agents are recommended. Best results are obtained when ASSET® NH₃ is incorporated or injected in a zone or band in the soil with the fertilizer component at a minimum depth of two (2) to four (4) inches. The recommendations for the use of this product are based upon the best current information available.

DOSAGE RECOMMENDATIONS

To determine the proper amount of ASSET® NH₃ to add to the fertilizer, multiply the recommended dosage rates below by the number of acres one ton of fertilizer will cover.

Row or Band and Injection Applications: Use ASSET® NH₃ at the rate of five (5) to six (6) ounces per acre.

Broadcast Applications: Use ASSET® NH₃ at the rate of ten (10) to eleven (11) ounces per acre.

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DRY GRANULAR FERTILIZER

ASSET® NH₃ may be impregnated on most nitrogen fertilizers or dry fertilizer blends that are composed of at least 50% of a combination of urea, nitrate or ammonium phosphate. Uniform application in the field is necessary to ensure optimum results.

USE AND DOSAGE RECOMMENDATIONS

To ensure uniform coverage of the fertilizer during the ASSET® NH₃ impregnation process, use a closed rotary drum mixer equipped with suitable internal spraying equipment, OR uniformly apply the ASSET® NH₃ (see dosage recommendations above) with water to produce an adequate amount of solution to uniformly treat/impregnate the dry granular fertilizer.

MIXING WITH ANHYDROUS AMMONIA

ASSET® NH₃ is readily soluble in liquid anhydrous ammonia. It is not soluble in ammonia vapor. Some liquid ammonia is required to keep the ASSET® NH₃ in solution. Carefully meter ASSET® NH₃ into the anhydrous ammonia nurse tank or applicator tank by pumping it through an accurate, calibrated metering device into the liquid ammonia, either after filling or as the tank is being filled. Use a positive flow system or check valves, where appropriate, to prevent one product from entering the delivery tank of the other. Introducing both products simultaneously into the nurse tank or applicator tank automatically provides the mixing required for a uniform, homogeneous solution.

DIRECTIONS FOR USE WITH ANHYDROUS AMMONIA

Meter 0.45 gallons (3.6 pints, or 4.2 lbs.) of ASSET® NH₃ into each ton of liquid ammonia. (This is equivalent to 3.2 quarts of ASSET® NH₃ per 3589 lbs. of anhydrous ammonia, or 80 lbs. of ASSET® NH₃ per 34,000 lbs. of ammonia.)

When used with anhydrous ammonia add ASSET® NH₃ at 0.034 ounces per pound of nitrogen applied. This should be based on the total amount of nitrogen applied per crop year. Apply ammonia mixture by injecting into soil in the same way anhydrous ammonia is normally applied. Problems may be encountered in applying the ammonia mixture when flow rates through delivery tubes are low, a buildup of solid material can occur in the delivery tubes or between the metering device and the injection shanks. Plugging can occur under these circumstances. To avoid or minimize this problem, observe the following:

1. Install a pressure gauge (0-60 psi) in the manifold. If delivery tube pressure is below 18 to 20 psi during application, buildup will likely occur. A rise in manifold pressure during application will give the operator an indication that a buildup problem is starting.
2. The meter should be set to deliver 5 to 8 lbs. more nitrogen per acre than normal setting with straight ammonia. ASSET® NH₃ may reduce flow through the meter, making calibration appear low.
3. Observe the following minimum application rates of nitrogen per acre:

| Knife Spacing (Inches) | Pounds of Nitrogen Delivered at Tractor Speed (MPH) | | | | |
|---------------------------|---|-----|-----|-----|-----|
| | 4 | 5 | 6 | 7 | 8 |
| 40 | 120 | 100 | 80 | 65 | 60 |
| 30 | 160 | 130 | 110 | 100 | 95 |
| 20 | 240 | 195 | 160 | 135 | 125 |

4. Make sure injection equipment adds the correct amount of ASSET® NH₃ to the nurse tank. Too much can result in plugging occurring at higher application rates than usual.

EQUIPMENT

The equipment used to inject ASSET® NH₃ into anhydrous ammonia must be appropriate for anhydrous ammonia service. No brass, copper or galvanized pipe or fittings should be used. Only hose, valves and fittings approved for anhydrous ammonia service can be used.

CONDITIONS OF SALE—LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES

Read the Conditions of Sale—Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

1. Refund of the purchase price paid by buyer or user for product bought, or
2. Replacement of the product used

To the extent allowed by law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to.

loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

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Disclaimer: Always refer to the label on the product before using Helena or any other product.

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ASSET NH3

Helena Chemical Company
PH: 901-761-0050
CHEMTREC: 1-800-424-9300
Effective Date: 02-07-00
Product: ASSET NH3

I. IDENTIFICATION

Chemical Name: PLANT NUTRITIONAL ADDITIVE.
Chemical Family: NOT APPLICABLE, FORMULATED MIXTURE.
Formula: NOT APPLICABLE, FORMULATED MIXTURE.
Synonyms: NONE
CAS Number: NOT APPLICABLE, FORMULATED MIXTURE.
EPA Number: NONE REQUIRED

II. PHYSICAL DATA

Boiling Point: 212 DEGREES F.
Freezing Point: 32 DEGREES F.
Spec Gravity: 1.020 GMS/CC
Vapor Pressure: NOT DETERMINED
Vapor Density: NOT DETERMINED
Solubility: SOLUBLE
Volatiles: 38%
Evaporation: NOT DETERMINED
Melting Point: NOT APPLICABLE
Appearance: CLEAR LIQUID, SEMI-SWEET ODOR.

III. INGREDIENTS

| Material | CAS Number | Percent | TLV | Hazard |
|--|------------|---------|----------|--------------------------|
| PROPRIETARY BLEND OF AMMONIA CARBOXYLIC ACIDS AND POLYACRYLIC ACID SALTS | | 100.00 | 15 MG/M3 | MILD SKIN & EYE IRRITANT |

IV. FIRE AND EXPLOSION HAZARD

Flash Point: NON-COMBUSTIBLE
Autoignition Temp: NOT APPLICABLE
Flammable Limit: NOT APPLICABLE
Extinguishing Media: NON-COMBUSTIBLE LIQUID, USE EXTINGUISHING MEDIA FOR UNDERLYING CAUSE OF FIRE.
Special Fire Fight Proc: FIREFIGHTERS SHOULD WEAR FULL-FACE, SELF CONTAINED BREATHING APPARATUS AND IMPERVIOUS PROTECTIVE CLOTHING. USE WATER TO COOL CONTAINERS EXPOSED TO FIRE.
Fire and Expl Hazard: PREVENT HUMAN EXPOSURE TO FIRE, FUMES, SMOKE, AND PRODUCTS OF COMBUSTION. EVACUATE NON-ESSENTIAL PERSONNEL.

V. HEALTH HAZARD

Carcinogen Information: NONE CURRENTLY KNOWN.
ACUTE EFFECTS OF OVER EXPOSURE
Swallowing: INGESTION MAY CAUSE IRRITATION, GASTROINTESTINAL DAMAGE, HEADACHE, DIARRHEA, CONFUSION AND COMA.
Skin Absorption: SKIN CONTACT MAY CAUSE SOME IRRITATION.
Inhalation: INHALATION MAY CAUSE IRRITATION AND BREATHING DIFFICULTY.
Skin contact: SKIN CONTACT MAY CAUSE IRRITATION.
Eye Contact: EYE CONTACT WITH PRODUCT MAY CAUSE IRRITATION.
Chronic Effects: NONE CURRENTLY KNOWN.
Other Hazard: NONE CURRENTLY KNOWN.
EMERGENCY AND FIRST AID PROCEDURES
Swallowing: IF SWALLOWED, CALL A PHYSICIAN OR POISON CONTROL CENTER. DRINK 1 OR 2 GLASSES OF WATER AND INDUCE VOMITING BY TOUCHING BACK OF THROAT WITH FINGER.
Skin: WASH SKIN WITH PLENTY OF SOAP AND WATER. GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

Inhalation: MOVE TO FRESH AIR. OBTAIN MEDICAL ATTENTION IF IRRITATION DEVELOPS.
Eyes: FLUSH EYES WITH PLENTY OF WATER. CALL A PHYSICIAN IF IRRITATION PERSISTS.
Notes to Physician: IN THE EVENT OF AN ADVERSE RESPONSE, TREATMENT SHOULD BE DIRECTED TOWARD CONTROL OF THE SYMPTOMS AND THE CLINICAL CONDITION OF THE PATIENT.

VI. REACTIVITY

Stability: Stable
Conditions to Avoid: NONE CURRENTLY KNOWN.
Polymerization: Will Not Occur
Conditions to Avoid: FIRE AND HIGH HEAT CONDITIONS.
Incompatibility material: STRONG OXIDIZERS AND STRONG ALKALINE CHEMICALS.
Hazardous Combustion: OXIDES OF NITROGEN, AMMONIA OR AMINES AND CARBON MONOXIDE.

VII. SPILL OR LEAK PROCEDURES

Spill or Leak Proc: RE-USE MATERIAL IF NOT CONTAMINATED. IF CONTAMINATED, ABSORB MATERIAL ON AN ABSORBENT AND PLACE IN A SUITABLE CONTAINER FOR PROPER DISPOSAL. AVOID RUN-OFF TO GROUND WATER, SURFACE WATER, OR SEWERS.
Waste Disposal Method: THIS MATERIAL MUST BE DISPOSED OF ACCORDING TO FEDERAL, STATE, OR LOCAL PROCEDURES UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT.

VIII. SPECIAL PROTECTION INFORMATION

Respiration: IF FUMES OR VAPORS EXCEED TLV, USE A NIOSH/MSHA APPROVED RESPIRATOR.
Ventilation: LOCAL EXHAUST SUFFICIENT.
Gloves: IMPERVIOUS
Eyes: CHEMICAL GOGGLES.
Other: EMERGENCY SHOWER, EYE WASH STATION, IMPERVIOUS APRON AND FOOTWEAR

IX. SPECIAL PRECAUTIONS

Special precaution: KEEP OUT OF REACH OF CHILDREN. DO NOT STORE WITH FOOD, FEED, OR OTHER MATERIAL TO BE USED OR CONSUMED BY HUMANS OR ANIMALS. DO NOT CONTAMINATE WATER SUPPLIES, LAKES, STREAMS, OR PONDS. STORE IN A SECURE, DRY, WELL-VENTILATED AREA, SEGREGATED FROM OXIDIZERS AND OTHER INCOMPATIBLE MATERIALS.
Other precaution:

X. SHIPPING INFORMATION

Shipping name: NOT REGULATED BY DOT, IATA OR IMDG.
Hazard Class: NONE
Identification No: NONE
Labels Required: NONE REQUIRED
Placarding: NONE REQUIRED
Freight Class: COMPOUND, FERTILIZER (MANUFACTURED FERTILIZER) LIQUID, NOIBN

| Chemical Name | Equivalent R.Q. |
|----------------|-----------------|
| NOT APPLICABLE | NOT APPLICABLE |

XI. GENERAL PRODUCT INFORMATION

National Fire Protection Association Rating:
(Rating level: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)
Health: 2
Fire: 0
Reactivity: 0
S.A.R.A. Title III Hazard Classification: (Yes/No)
Immediate (Acute) Health: Y
Delayed (Chronic) Health: N
Sudden Release of pressure: N
Fire: N
Reactive: N

Mail inquiries to: 225 Schilling Blvd., Suite 300
Collierville, TN 38017

Helena Chemical Company believes that the data contained herein is factual. This data is not to be taken as a warranty or representation of legal responsibility. It is offered solely for your consideration, investigation and verification.

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